
THE INFLUENCE OF THE MAORI POPULATION ON NZ DIALECT AREAS

Laurie and Winifred Bauer: *School of Linguistics and Applied Language Studies, Victoria University of Wellington.* <laurie.bauer@vuw.ac.nz>

Abstract

This paper examines data from a national survey of children's playground vocabulary, which has revealed evidence of significant dialect divisions in New Zealand. In particular, the Northern part of the North Island is distinct, and sometimes the North Island differs from the South. There is also evidence of considerable variation depending on socio-economic factors. This paper examines the hypothesis that the location of the Maori population in New Zealand is an important contributory factor in the patterns of regionalisation which have emerged.

1. Background

The results reported in this paper¹ derive from a study of the playground vocabulary of New Zealand school children. Year 7 and 8 students in 150 schools located from Kaitaia (in the far north of the North Island) to Bluff (at the Southern tip of the South Island) were surveyed by means of a questionnaire presented to them by their teacher. The distribution of the participating schools can be seen in the data maps presented below; 57 were in the South Island and 93 in the North Island.

The questionnaire covered the names of some playground games, playground rituals (e.g. what you say on the first of the month), basic social interactions, words for expressing feelings, and a few words for personal

stereotypes. Each teacher read out the scenarios in the questionnaire to a class of children and wrote down the children's responses. Multiple responses to questions were encouraged, and in most cases given, although a few teachers reported only majority forms. Our method treated all responses equally, and the shadings on the maps below indicate that the appropriate form was reported from that school. Thus the study was based on 150 sets of data, but there were sometimes as many as 20 responses to an individual question from one school.

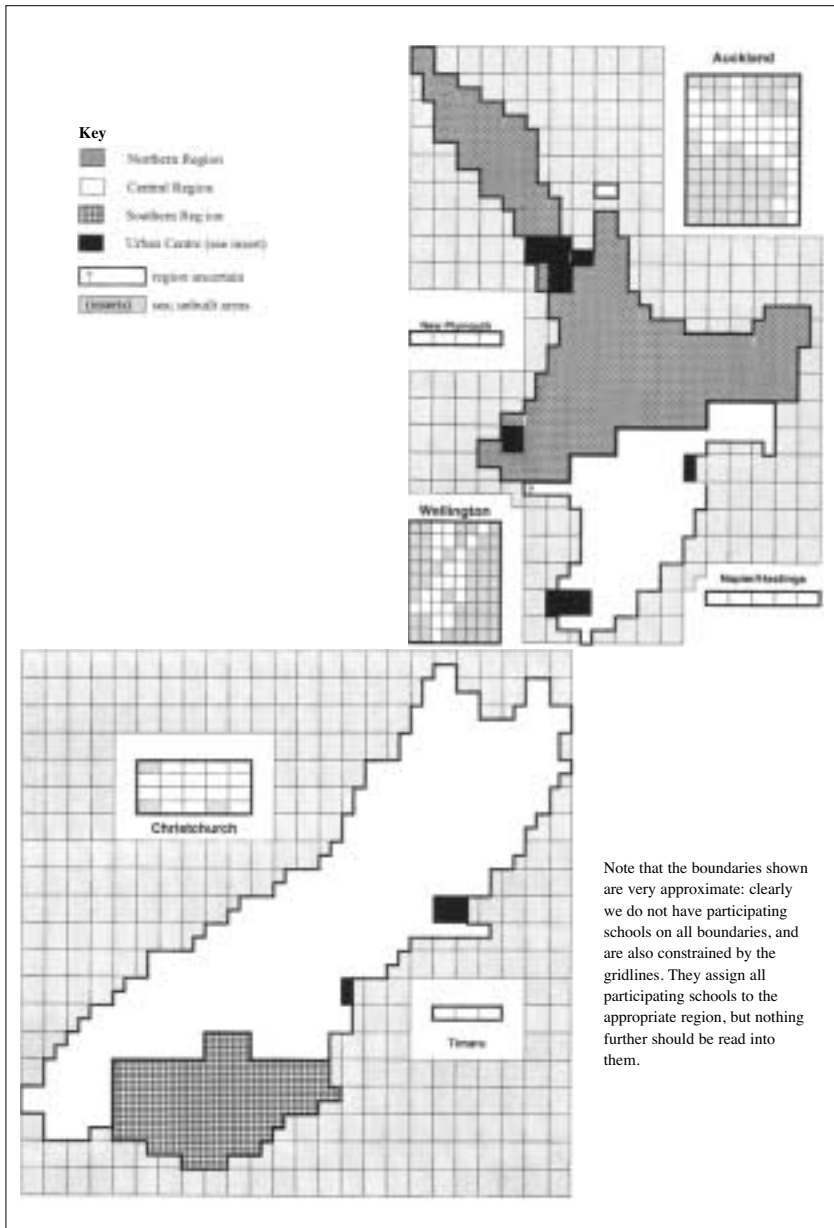
The problems and advantages of the methodology have been discussed in detail elsewhere (e.g. Bauer and Bauer 2000a), and will not be treated further here. However, for the purposes of this paper, it is important to note that we know no details about the individual children who provided specific responses; all we know is the linguistic response and the characteristics and location of the school from which the response came.

The results of the questionnaire as a whole showed that in some sets of data there are three distinct dialect areas in New Zealand, which we call Northern, Central and Southern. The Northern Region extends as far south as Taranaki and the Southern edge of the volcanic plateau. It includes Poverty Bay, but excludes Hawkes Bay. The Central Region extends from Hawkes Bay and the southern fringe of the volcanic plateau across Cook Strait, and down as far as north Otago. It includes the Central Otago lake resorts. The Southern Region consists of East Otago, some of Central Otago, and Southland. Map 1 shows these three regions.

In other cases, the data shows a clear division between the North and South Islands. (There are also a few highly localised forms.) More information about the data which supports these divisions can be found in Bauer and Bauer (2000b).

The data was mapped and graphed to determine which of the many responses showed signs of regionalisation or social differentiation, and then the results for the forms which appeared likely to be interesting were analysed statistically. Full details of the statistical analysis undertaken are not given here, but a brief outline is provided to put the results in context.

Firstly, pairwise comparisons were made between schools to determine the overall level of agreement or difference in their responses. This enabled us to decide on the most likely regional boundaries in those areas where they were unclear from the responses to individual questions. (Taranaki, for instance, sometimes behaved like the Northern Region, and sometimes like the Central Region; comparisons were made between Taranaki schools and all the schools



Map 1: Main Regions

in the areas adjacent to Taranaki, and these showed that Taranaki is more strongly linked to the north linguistically when all the data is taken together.)

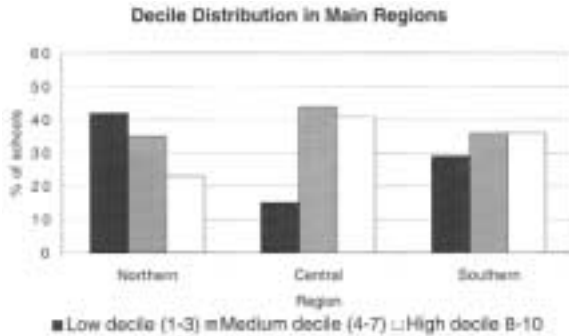
After the regions were determined, each of the responses selected for statistical analysis was analysed in relation to a number of variables (co-variates in statisticians' terms), including Main Region, Island and Decile (see below). A statistical method called Generalized Estimating Equations (GEE) (Liang and Zeger 1986) was used to analyse this data. The statistical package SAS (version 6.12) was used to implement the GEE approach, using PROC GENMOD. This process delivered p-values for each of the co-variates in the analysis in relation to each of the linguistic forms analysed. This method also allowed the interaction between the co-variates to be investigated, so that their relative importance in explaining the variation could be determined.

In the course of analysing the initial data from the questionnaire we formed the hypothesis that the location of the Maori population had a significant effect on the patterns that emerged. In particular, we believe that the distinctness of the Northern Region is often related to the high Maori population in that region, and in some cases, the fact that the North and South Islands differ linguistically can also be attributed to this fact. This paper sets out the evidence which shows this influence of the Maori population on New Zealand dialect areas. In some cases, the connection with the Maori population is direct, since it involves the use of words from the Maori language. In other cases, the vocabulary has been previously established as 'Maori English'. In yet other cases, the vocabulary pertains to concepts which reflect Maori cultural norms. Finally, there are cases where we suggest that it may be possible to deduce a link on the basis of similarity of patterning.

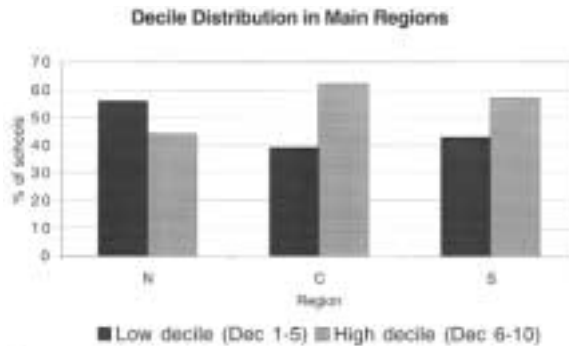
One of the most pervasive effects of the Maori population can be seen in the socio-economic profile of the country. The Ministry of Education gives each school a decile rating based on the socio-economic background of the children attending that school. Schools are put on a socio-economic continuum, and the continuum is divided into ten equal groups, labelled Deciles 1-10. The schools with children from the lowest socio-economic backgrounds are Decile 1 schools, and the schools with children from the highest socio-economic backgrounds are Decile 10 schools. Of course, most schools have children from a variety of socio-economic backgrounds, so the Decile rating of a school reflects only the average socio-economic level of the children in the school.

There is plenty of evidence that Maori students predominate in the lowest socio-economic groups in New Zealand, and that the lowest decile schools

have a lot of Maori children. In 1998, the year before our survey, 42.2% of the children in Decile 1-3 primary schools identified themselves as ethnically Maori, compared with just 6.0% of the children in Decile 8-10 primary schools (Ministry of Education, 1999: 50). From our point of view, what is important is that the decile mix of schools in our sample differs in different parts of the country. In our sample, there are far more schools in the lowest three deciles in the Northern Region, and far more high decile schools in the Central Region, as the following graphs show. The first graph (1a) groups the deciles into three chunks: low decile schools (1-3), medium decile schools (4-7) and high decile schools (8-10). There is a problem with this – there are more deciles in the medium group, which exaggerates the size of this group, but it allows us to isolate the very lowest decile schools. If we divide the deciles into



Graph 1a: Decile distribution of schools in our sample in the three Main Regions

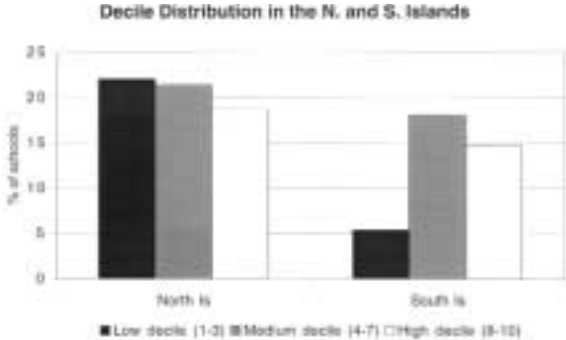


Graph 1b: High and Low Decile schools in our sample in the three Main Regions

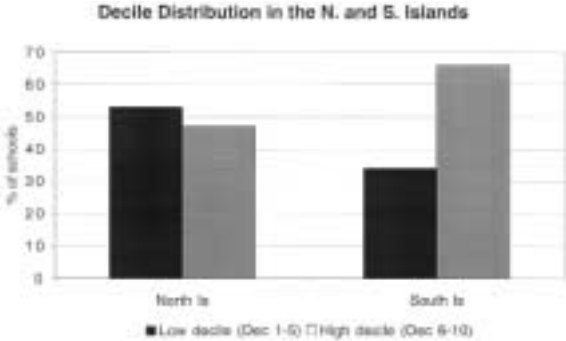
two equal groups, low decile and high decile, the result is shown in Graph 1b. The large Maori population in our Northern Region is an important factor in explaining the preponderance of low decile schools in that region: 65.8% of the Maori children in schools are in our Northern Region (Ministry of Education, 1999: 49) – although note that this figure is for all schools, and not just primary schools.

The two Islands of New Zealand also show the same sort of difference. Graphs 2a and b show that the North Island has almost all the lowest decile schools in our sample, and the South Island has very few low decile schools. Again, the large Maori population in the North Island (compared to the South) is a significant factor in producing the decile imbalances between the Islands.

From the point of view of our data, there are many forms which correlate



Graph 2(a): Decile distribution of schools in our sample in the North and South Islands



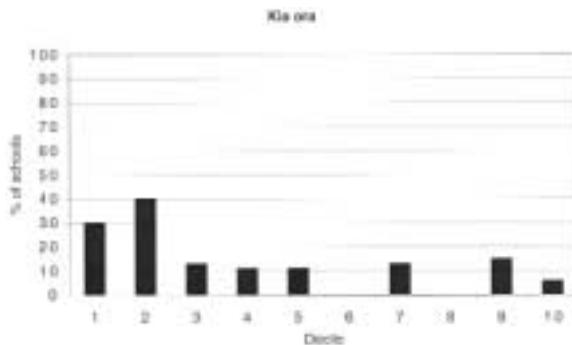
Graph 2(b): Low and High Decile schools in our sample in the two Islands

strongly with both the Northern Region and with low decile schools, or with the North Island and with low decile schools, or with all three of these factors. These factors are often shown by the statistical analysis to be quite closely linked: the forms are Northern because they are low decile and/or they are low decile because they are Northern. What the statistics **do not** show is that in quite a number of cases, these forms are low decile and Northern because that is where the Maori population is found in greatest numbers. We now consider a number of sets of data which show fairly clearly the influence of the Maori population on our regional and social data.

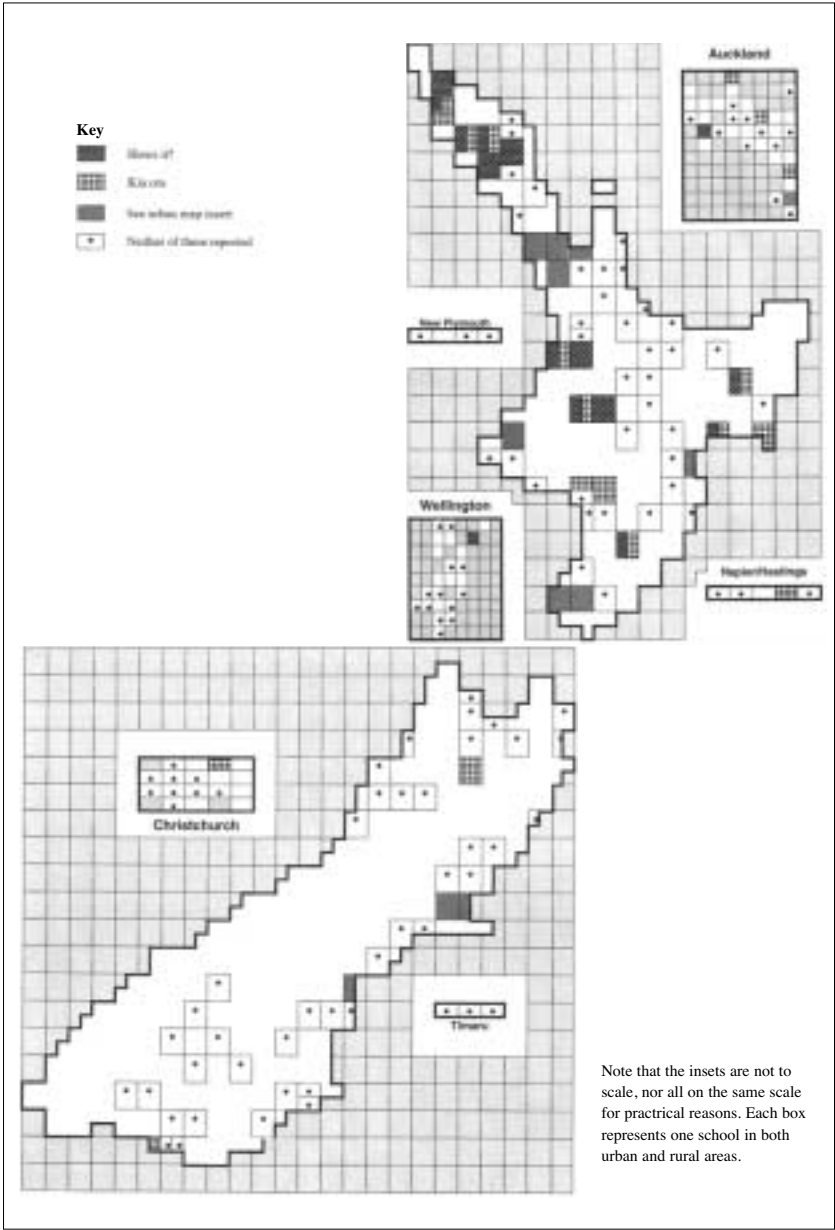
2. Forms overtly derived from *te reo Maori*

There were a few responses to questions which derive directly from *te reo Maori*. (It is impossible to be precise, because in a number of instances, there is doubt: *mucka* probably represents *maka*, but we cannot be sure; however, the best guess is around 30 items.) One of these is the greeting *kia ora*. This greeting was not reported particularly often, but all except three reports were from the North Island, as Map 2 shows.

Note, however, that the statistical analysis showed that the correlation with the North Island rather than the South was not particularly strong (p-value 0.0436). *Kia ora* was also more common in low decile schools, as Graph 3 indicates. The bars on the graph show the percentage of schools in each decile which reported this response. (We do not know whether the reports from higher decile schools came from Maori students in those schools or from



Graph 3: Decile distribution of *Kia ora*



Map 2: *Kia ora and Howz it?*

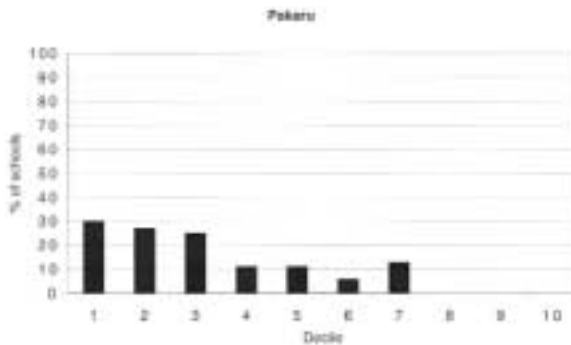
politically correct TP's (teachers' pets) trying to please the teacher. The latter seems likely, since there was some evidence from follow-up visits to 33 schools that Maori words known to Maori children in the high decile schools had not been reported in the original responses.) The p-value for the low decile correlation was 0.0156. The statistics showed that the low decile factor is more important in explaining the distribution of *kia ora* than the North Island factor. In other words, the fact that *kia ora* is a low decile form largely explains why it is more common in the North Island: that is where the low decile schools are.

A second example in this category is *pakaru*, which was elicited in response to the following scenario:

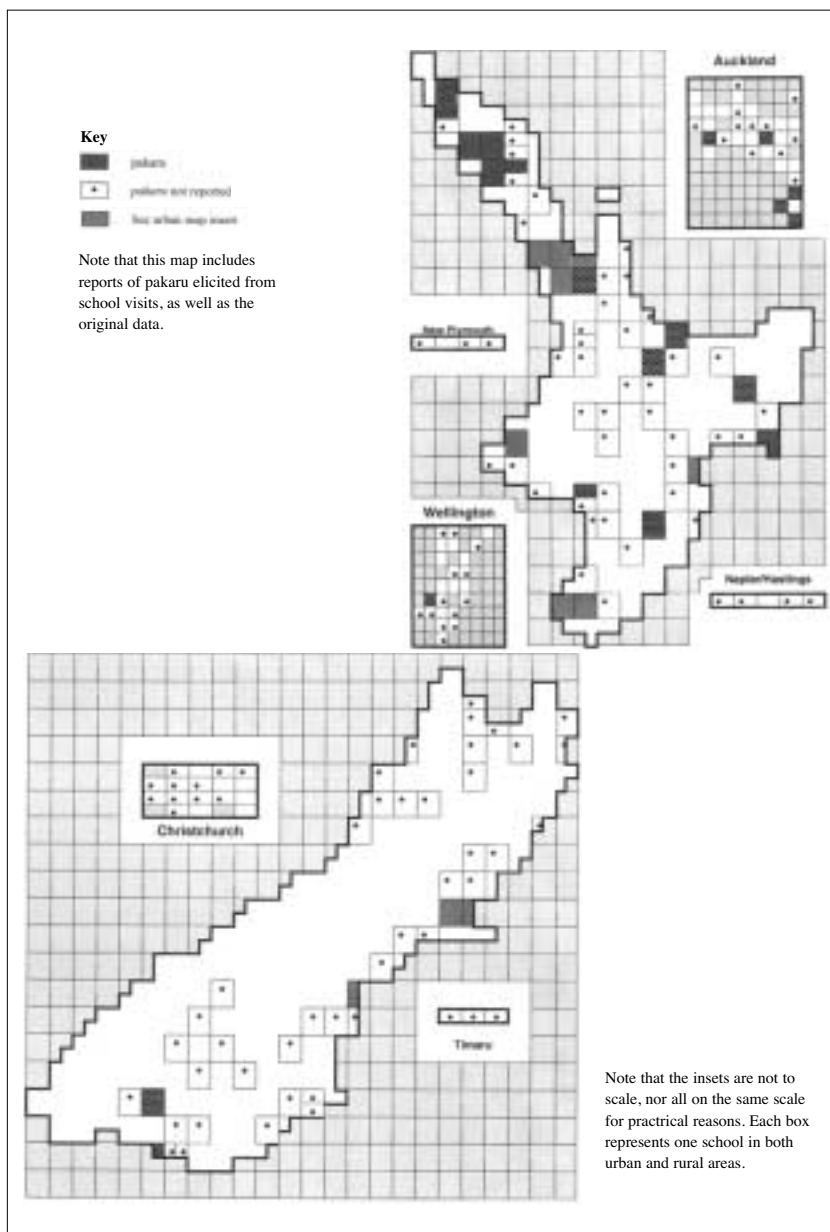
When you are riding your bike, you lose control, and crash into a bank.
Your bike is damaged so badly that you can't ride it. How would you describe the state of your bike?

In the original data there was just one South Island report of this form, but a second school reported using it during the visits to selected schools to interview children (the final phase of the research for the project). Both are shown on Map 3. (Note that the original report came from one of the schools which also reported *kia ora*: it is a decile 2 school; the other is a decile 3 school.)

The correlation with the North Island is still not particularly strong statistically: the p-value is 0.0233. In addition, this form is statistically more common in the Northern Region than the Central Region (p-value 0.0096). It



Graph 4: Decile distribution of *pakaru*



Map 3: *Pakaru*

also correlates highly significantly with low decile schools (p-value 0.0002), as Graph 4 shows. (Note that all the reports in Auckland are in South Auckland, for example.) The statistical analysis shows that the fact that this form is Northern is largely due to the fact that it is low decile (and most of the low decile schools are in the Northern Region). The analysis also shows that the fact that this form is more common in the North Island is largely due to the fact that it is low decile (and most of the low decile schools are in the North Island).

3. Forms known to be features of ‘Maori English’

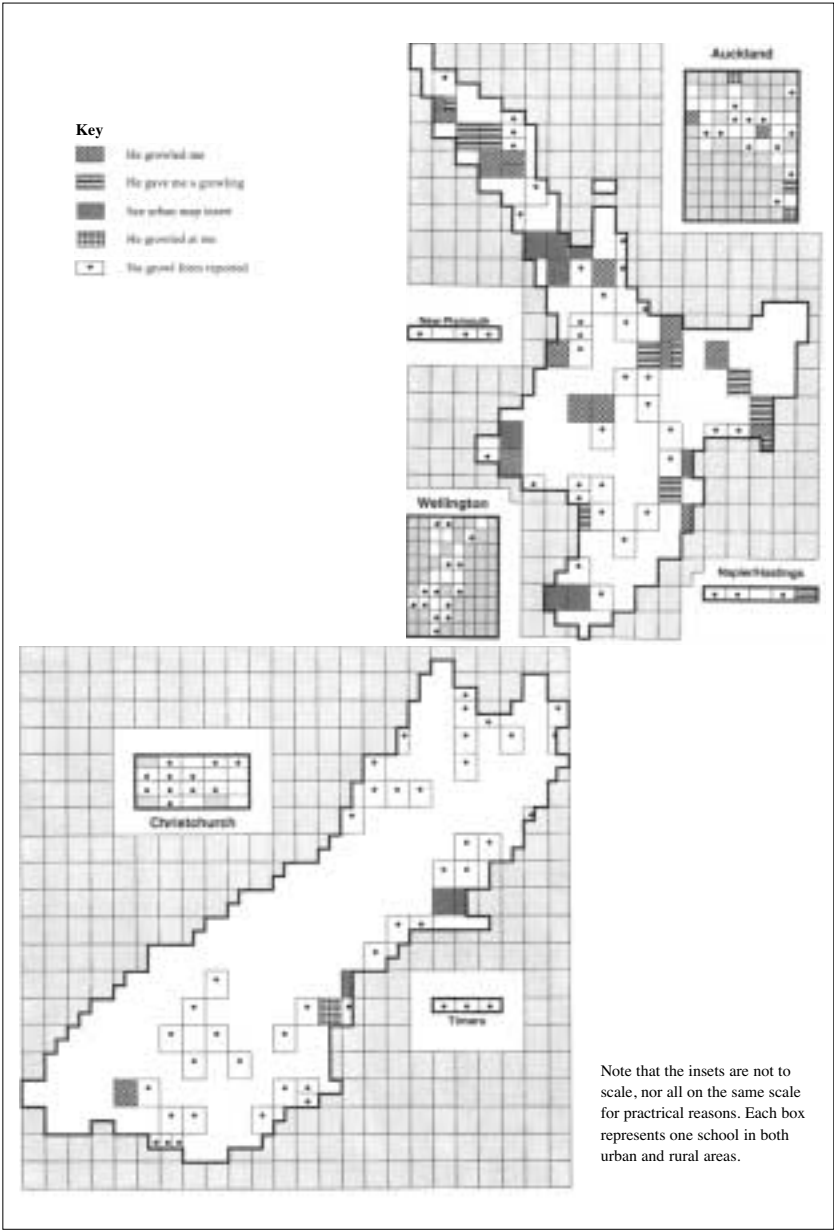
We have put ‘Maori English’ in scare quotes throughout as a mark of caution. It is not a well-described variety of English, although many – perhaps even most people – believe that they can identify examples of it. Also, while many ethnically Maori speakers use a form of English which is identifiably Maori, not all ethnically Maori speakers do, and in areas with high Maori populations, this form of English is also used by some who are not ethnically Maori.

There are also some items in our data where a term that is known to be a feature of ‘Maori English’ shows the same kind of distributional pattern as the forms discussed in the previous section. One case is the use of the word *growl*, elicited by the following scenario:

You ran onto the school garden to get back your ball, and accidentally trod on some plants. The caretaker saw you and told you how cross he was with you. Later, you want to tell your friend what the caretaker did. What would you say?

There were three constructions using the root *growl* in the responses: *he growled me*, *he growled at me*, *he gave me a growling*. *He growled me* is identified by McCallum (1978: 141) as a construction ‘which may be unique to Maori speakers of English’. This is a fairly typical case of the transference to English of the Maori construction. (The Maori word for ‘growl’, *ko(w)hete*, is a transitive verb.) Map 4 shows the distribution of *growl* forms.

Of the two standard English forms, nearly all the responses were *gave me a growling*; there were just two reports of *growled at me*. There are two things to note about the distribution of these forms: the scarcity of any of these in the South Island; and the thinning out of responses in the part of the North Island that falls in the Central Region. (The data obtained from the school visits



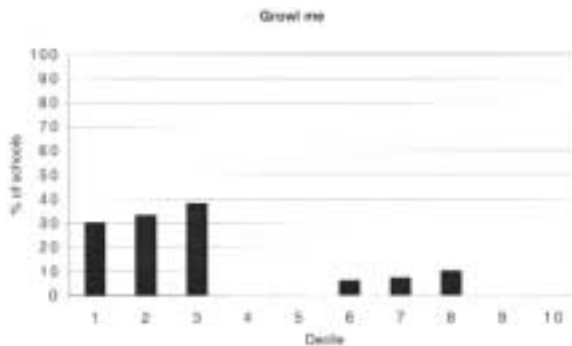
Map 4: Grawl-forms

showed that in all but two of the South Island schools visited, the children said they would not use *growl* in any form. This included Maori children with North Island connections. However, there were two schools where one child said they would use it, one in the construction *growl me*, and the other in the standard English constructions. The visits thus confirmed the rarity of this in the South Island.)

We did the statistical analysis for both *growl me* and for all *growl* forms taken together. *Growl me* is highly significantly low decile: p-value 0.0006, see Graph 5.

It is highly significantly more common in the Northern Region than the Central Region (p-value 0.0001). In addition, it is just significantly more common in the North Island than the South (p-value 0.0155). (It is also just significantly more common in rural schools than in urban ones 0.0368 – another common correlation with the forms we believe show Maori influence.) The statistics show that the low decile correlation again largely explains the North Island correlation. However, the Northern Region correlation is also very important alongside low decile in accounting for this form. In addition, *growl me* is more strongly associated with low decile in the Northern Region than in the Central Region: the p-values are respectively 0.0168 and non-significant 0.2189.

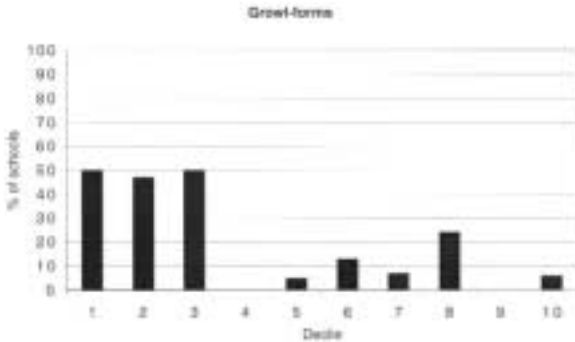
When all the *growl*-forms are considered, they were shown to be highly significantly low decile (p-value 0.0004), see Graph 6. *Growl* forms are also more common in the Northern Region than the Central Region (p-value 0.0001), and more common in the North Island than the South (p-value 0.0011). Here, however, both the regional factors are important alongside



Graph 5: Decile distribution of *growl me*

Decile in accounting for the distribution. Again, *growl*-forms are much more strongly low decile in the Northern Region than in the Central Region: the p-value for the low decile correlation in the Northern Region is 0.0139; the p-value for low decile in the Central Region is not significant (0.2104). (Because there is just one school reporting *growl* in the Southern Region, no sensible statistic is possible there.)

The forms where we have statistics and fairly obvious indications of a Maori connection all show similar sorts of patterns. They are all low decile, and usually also correlate with the Northern Region or the North Island, or both. In all cases, the importance of Decile in accounting for the distribution is shown statistically to outweigh, or at least to equal, the regional factors in importance. There is a strong correlation between the schools reporting these forms and schools in which there is statistically speaking a high Maori population. Thus although we have no way of pinpointing contributions from ethnically Maori children to our questionnaire data, we feel sure that these responses must have been contributed by Maori children or by non-Maori children who have been influenced by the speech patterns of Maori children. While forms like *kia ora* may be taught in classrooms, and their occurrence could reflect this overt teaching, the same is not true of non-standard forms such as *growl me*. While these are produced by speakers who are not ethnically Maori as well as those who are, they appear only where there has been a high degree of exposure to ‘Maori English’. Thus they reflect a speech pattern which derives from ethnically Maori speakers, whether they are produced by ethnically Maori speakers or not.



Graph 6: Decile distribution of the root *growl*

4. Forms which pattern similarly to overtly Maori forms

We found some forms which we did not know beforehand to be linked to the Maori population, but where the patterning in terms of decile and regional distribution strongly suggest that this is the case. Three examples are considered.

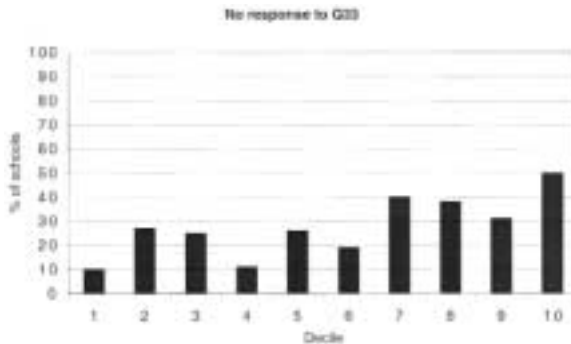
The following question was designed to elicit any words there might be for Maori *whakama* in English. The question was:

33 You have just won your school speech competition. The Principal talks to you afterwards and tells you what a wonderful speech it was, and how proud (s)he is of you. You feel very uncomfortable about this. You want to tell your friend **how you felt**. What would you say?

The *whakama* reaction is one of extreme outward embarrassment in the face of praise, even if inside the praise is welcome.

The reactions of the schools to this question were interesting. A large number of schools reported that the children would not feel embarrassed under these circumstances. Some schools even went so far as to comment that it was a stupid question. In other schools, the children responded to the scenario in a way which appears to reflect the *whakama* experience, although they did not use the term *whakama*. The decile distribution of the schools which provided no response to this question is illuminating, see Graph 7. Note the definite tendency for these to be high decile schools.

Two of the responses provided were quite explicit about the dual nature of



Graph 7: Decile distribution of schools providing no response to Q33

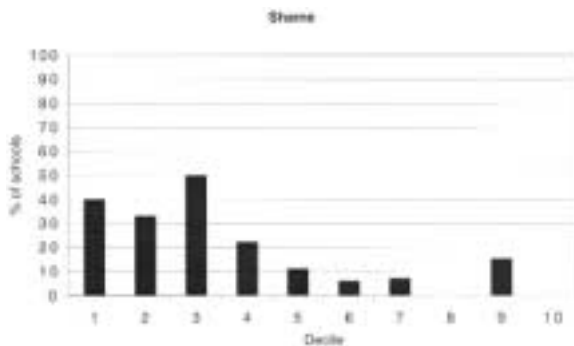
the reaction to this situation: *I felt good on the inside, but not on the outside; a bit shamed but OK*. However, these were both one-off responses. The most common response to this used some form of the root *shame*, most often *I felt shame* or *I felt shamed (out)*. The first of these was frequent enough to show correlations which are of interest in this context.

Shame was shown to be highly significantly low decile (p-value 0.0001), which Graph 8 makes visible.

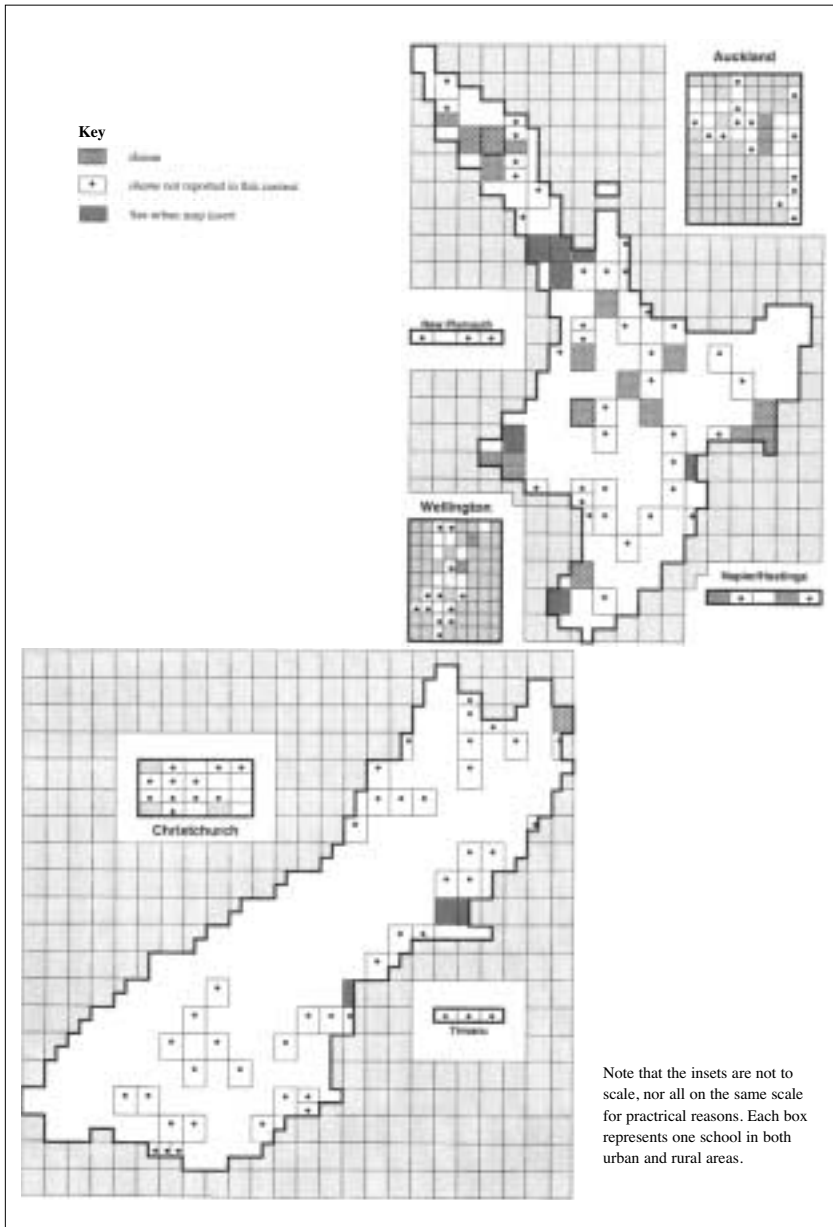
There is also just significantly more use of *shame* in the Northern Region than in the Central Region (p-value 0.0174). It is significantly more common in the North Island than the South (p-value 0.0042), see Map 5.

Decile again is much more important than Island in accounting for this form, although Island is not negligible. Decile also to a very large extent accounts for the difference between the Northern and Central Regions in their use of *shame*. Once again, we see that Decile is the most important factor affecting the distribution of a form which is strongly linked to the Maori population. (While the *whakama* experience may be common to Pacific Island students as well as Maori ones, the majority of the relevant responses here did not come from areas with a particularly high density of Pacific Islands students, 84.7% of whom are in Auckland and Wellington (Ministry of Education 1999: 49)).

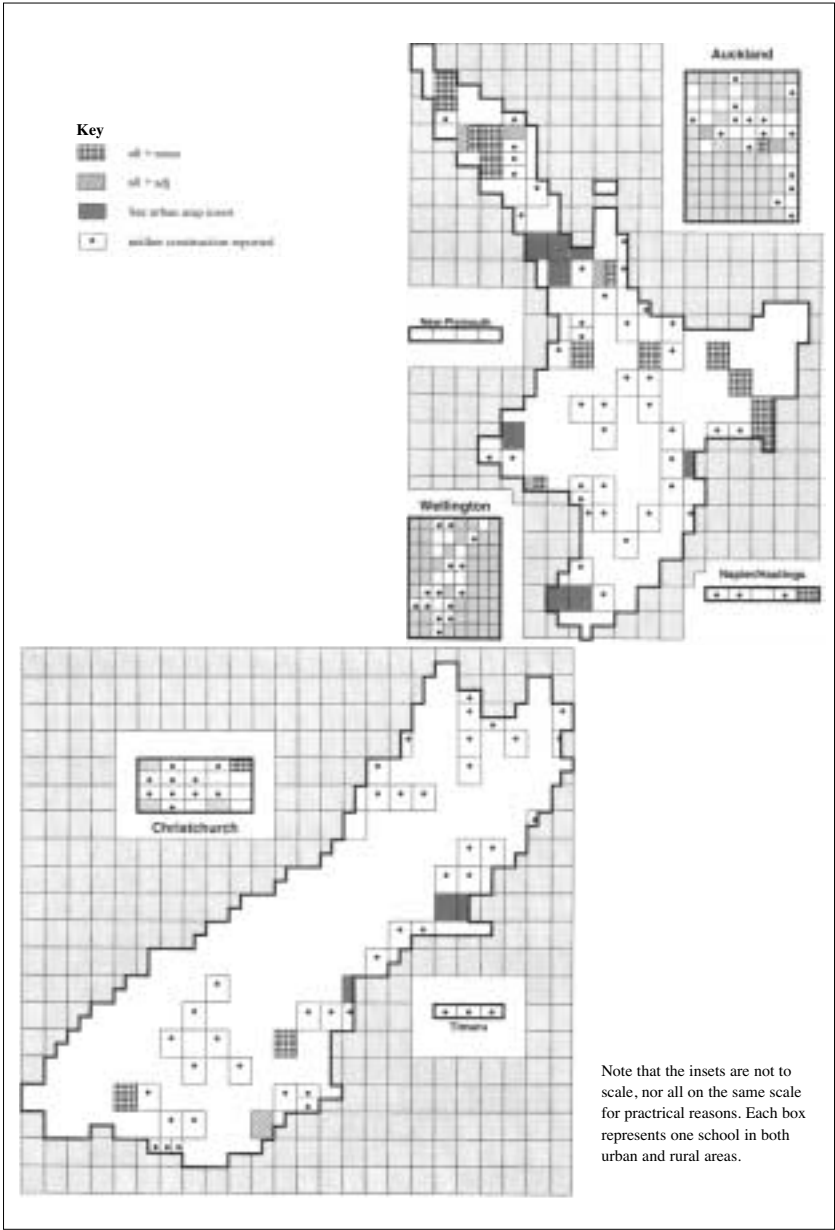
In the answers to several questions, we got responses using the construction *all + adj* or *all + noun*: *It's all good*; *you're all teko* (Maori for 'wrong', 'lies'); *you're all kaka* (Maori for 'shit'). (We got responses like *bull-kaka*, too: a classic example of code-switching!) Given the occurrence of Maori words in the lexical slot in approximately a quarter of the reports of this



Graph 8: Decile distribution of *shame* in response to Q33



Map 5: *Shame* expressing “whakamaa”

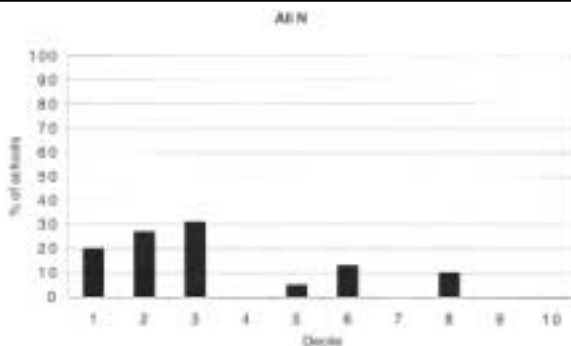


Map 6: All + adj, all + noun

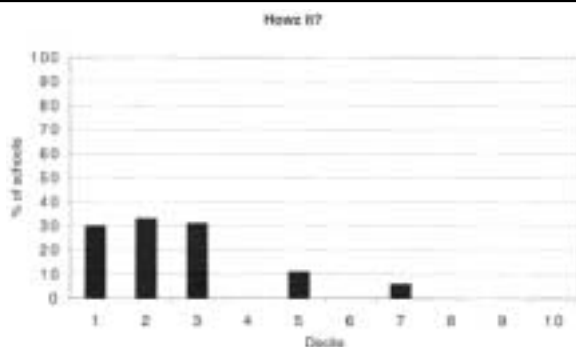
construction, it again seems possible that this construction is produced under the influence of ‘Maori English’. The distribution of these forms – from whatever questions they occurred in – is shown in Map 6.

Most of the reports came from schools in the lowest three deciles, as Graph 9 shows for *all* + N. (There were more examples of *all* + N than *all* + Adj, and there were so few of the latter that the graph is not particularly revealing; however it has the same general shape as the graph for *all* + N.) We do not have the statistical analysis for this group of forms, since they were responses to a variety of questions, and were low frequency forms. However, it is highly likely that the statistical analysis would confirm the correlation with low decile, and also confirm the tendency for these to be more common in the Northern Region than the Central Region. The noun forms reported, with number of schools reporting them were: *all (bull)shit* (9); *all crap* (3); *all teko* (3); *all kaka/garks/gacks* (2 – some of these were alternatives from the same school); *all lies* (2); *all plaque* (1); *all class* (1). (The forms *garks* and *gacks* are almost certainly corruptions of *kaka*, and so were grouped with it.) The adjective forms were *all sweet* (2); *all good* (2); *all mushy* (1); *all munted up* (1); *all aggro* (1); *all angus* (1). (There is doubt about the part of speech of the last two, but nothing of consequence hangs on this classification.) There was also one report of *You’re all beep!* We take it that the beeped out item was *shit*. (The high decile schools reported *all shit*, *all class*, *all sweet*, *all angus*.) Given the similarity of the patterning of this form and the overtly Maori forms discussed above, we suggest that this may be another previously unidentified construction of ‘Maori English’.

A final example is the greeting *Howz it? Howz it?* is highly significantly



Graph 9: Decile distribution of *all* + N

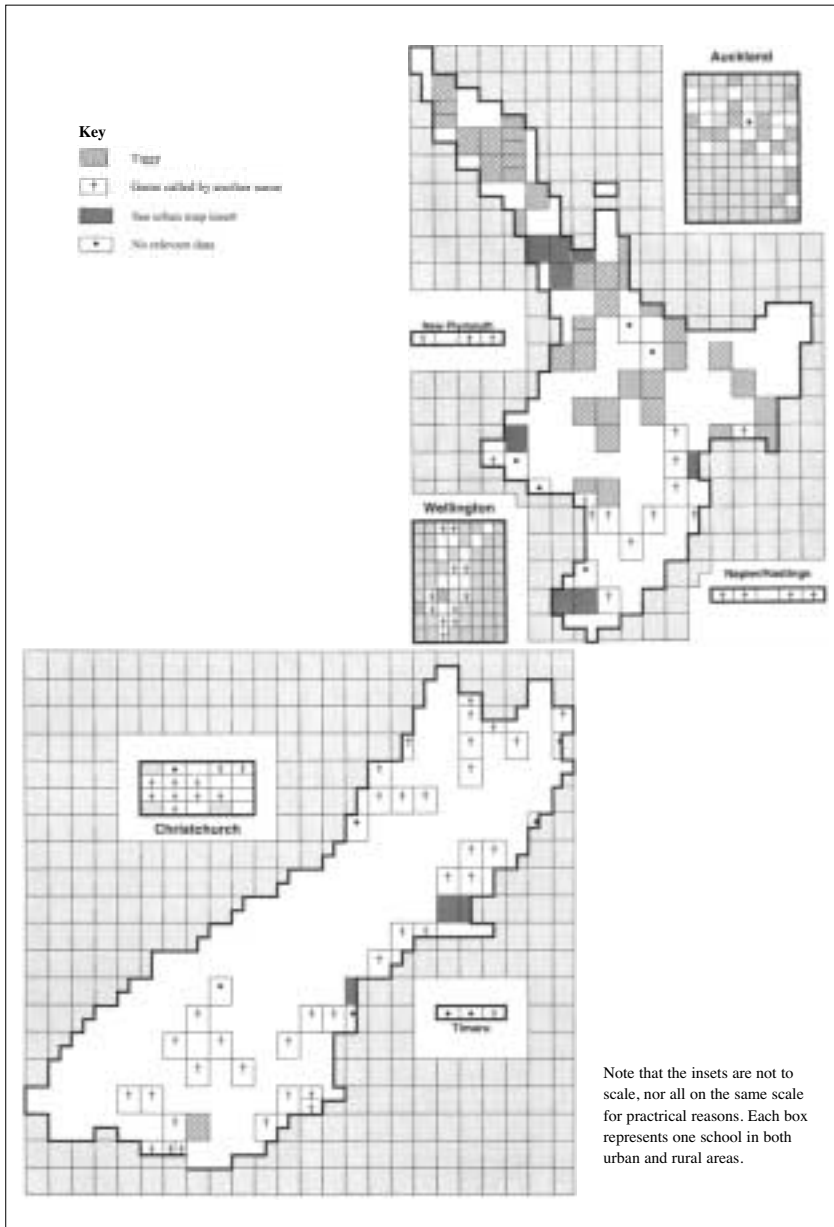


Graph 10: Decile distribution of *Howz it?*

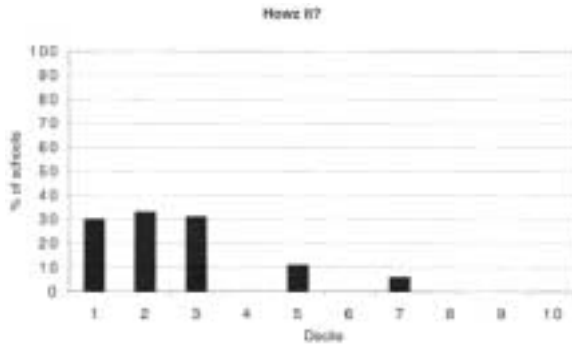
low decile (p-value 0.0004), see Graph 10, was reported only in the North Island, and is significantly more common in the Northern Region than the Central Region (p value 0.0016). The distribution of *Howz it?* is shown on Map 2, alongside the greeting *kia ora*. Many of the schools reporting *Howz it?* are the same schools as reported *kia ora*. Of the ones that did not report *kia ora*, all reported some other form which is typically Maori. The overall patterning of the data is very similar to that seen for other Maori-linked forms: Decile is very important in explaining the distribution of this form, although the fact that it is exclusively a North Island form is clearly also highly significant. This suggests the possibility that *Howz it?* may have been adopted particularly widely in areas where there is a large Maori population. *Howz it?* is not exclusive to New Zealand, but independent of how it is used elsewhere, our evidence would suggest that currently it is yet another characteristic of ‘Maori English’.

5. Forms which are not strongly associated with the Maori population

On the other side of the coin, there are forms which are Northern and low decile and not strongly associated with the Maori population. These show rather different characteristics statistically. We consider just one example, the use of *Tiggy* as the name of the chasing game. The distribution of the name *Tiggy* is shown on Map 7, and Graph 11 shows the decile distribution of this name.



Map 7: *Tiggy*



Graph 11: Decile distribution of *Tiggy*

Tiggy is a low decile form (p-value 0.0013), it is more common in the Northern Region than the Central Region (p-value 0.0001), and also more common in the Northern Region than the Southern Region (p-value 0.0001). In addition, it is more common in the North Island than the South (p-value 0.0000, derived from a non-zero figure, and so highly significant). However, the statistical analysis for *Tiggy* shows that the regional distribution (i.e. the prevalence in the Northern Region and the North Island) is much more important in accounting for the distribution of *Tiggy* than the decile distribution: *Tiggy* is chiefly a low decile form because it is Northern, and not the other way round. The prevalence in the Northern Region also accounts to a large extent for the fact that this name is more common in the North Island. Thus in forms which we know are not specifically linked to the Maori population, the interaction between Decile and the regional factors is different from those which show a clear link to the Maori population.

6. Conclusions

From the data presented in this paper, we have shown that forms which are closely associated with the Maori population have recurring characteristics in terms of the variables studied. They are associated most strongly with low decile, and also show strong links to either the Northern Region or the North Island or both. It is our hypothesis that other forms which pattern in the same way are likely to be features of 'Maori English' too. Thus this method of gathering data may be a way of identifying other features of 'Maori English'.

It is also clear from the data presented in this paper that Maori people play a significant part in creating the patterns of regional and social differentiation found in New Zealand. In particular, the high density of the Maori population in the Northern areas of the country is one of the most important factors in making the Northern Region so strongly different linguistically from the Central Region, and is often also an important factor in making the North Island linguistically different from the South Island.

Note

1. The research reported in this paper was supported by the Marsden Fund of the Royal Society of New Zealand. We would like to thank all the schools, teachers and children that assisted us in gathering the data for this project. We also gratefully acknowledge the statistical guidance provided by I-Ming Liu of the School of Mathematical and Computing Sciences, Victoria University of Wellington and the comments of two anonymous Te Reo referees.

References

- Bauer Laurie and Winifred Bauer. 2000a. 'Two unrelated changes in the English of young New Zealanders.' *Kotare* 3 (1): 3-9.
- Bauer Laurie and Winifred Bauer. 2000b. 'Nova Zelandia est Omnis Divisa in Partes Tres.' *New Zealand English Journal* 14: 7-17.
- Liang, K. Y. and S. L. Zeger. 1986. 'Longitudinal data analysis using generalized linear models.' *Biometrika* 73: 13-22.
- McCallum, Janet. 1978. 'In Search of a Dialect: an exploratory study of the formal speech of some Maori and Pakeha children.' *New Zealand Journal of Educational Studies* 13: 133-143.
- Ministry of Education. 1999. *Education Statistics of New Zealand for 1998*. Wellington: Ministry of Education.

Copyright of Te Reo is the property of Linguistic Society of New Zealand and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.